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# **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims**

Claim 1 (Currently amended): A compound of formula (I):

wherein:

R<sup>1</sup>, R<sup>2</sup>-and R<sup>3</sup>-each independently represent: hydrogen; an alkyl group which is unsubstituted or substituted by a hydroxy, alkoxy, alkylthio, amino, mono- or di-alkylamino, hydroxycarbonyl, alkoxycarbonyl, acylamino, carbamoyl or alkylcarbamoyl group; or a group of formula

wherein n is an integer from 0 to 4 and R<sup>6</sup> represents: a cycloalkyl group; a phenyl group which may be unsubstituted or substituted by one or more halogen atoms or alkyl, hydroxy, alkylenedioxy, alkoxy, amino, mono- or di-alkylamino, nitro, cyano or trifluoromethyl groups; or a 3 to 7-membered ring comprising from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur, which ring may be unsubstituted or substituted by one or more halogen atoms or hydroxy, phenyl, alkoxycarbonyl, amino, mono-alkylamino, di-alkylamino or hydroxycarbonyl groups or one or more alkyl groups which may in turn be unsubstituted or substituted by one or more halogen atoms or hydroxy, alkoxy, hydroxyalkoxy, phenyl, alkoxycarbonyl, amino, mono-or di-alkylamino or hydroxycarbonyl groups;

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R<sup>1</sup> represents hydrogen, a C<sub>1</sub>-C<sub>4</sub> alkyl group or a group of formula

 $-(CH_2)_nR^6$ 

wherein n is 0, 1 or 2 and  $R^6$  represents phenyl, pyridyl or morpholinyl;  $R^2$  and  $R^3$  independently represent a  $C_1$ - $C_5$  alkyl group, a  $C_{3-10}$  cycloalkyl group, or a group of formula

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 $-(CH_2)_nR^6$ 

wherein n is 0, 1 or 2 and R<sup>6</sup> represents an unsubstituted or substituted phenyl or pyridyl group; either R<sup>4</sup> and R<sup>5</sup> together with the nitrogen atom to which they are attached form a 3 to 7-membered ring comprising a total of from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur, which ring may be unsubstituted or substituted by one or more halogen atoms or hydroxy, oxoalkyl, carbamoyl, hydroxycarbonyl, alkoxycarbonyl, trifluoroacetyl, amino, monoor di-alkylamino groups or an alkylene group, or one or more alkyl, alkenyl or alkynyl groups which may in turn be unsubstituted or substituted by one or more halogen atoms or hydroxy, alkoxy, hydroxyalkoxy, amino or mono- or di-alkylamino groups, or R<sup>4</sup> and R<sup>5</sup> independently represent hydrogen, an amidino group or an alkyl, alkenyl or alkynyl group which may be unsubstituted or substituted by one or more halogen atoms or hydroxy, alkoxy, alkylthio, amino, mono- or di-alkylamino groups, or R<sup>4</sup> represents hydrogen or an alkyl group and R<sup>5</sup> represents a group of formula

 $-(CH_2)_n-R^7$ 

wherein n is an integer from 0 to 4 and R<sup>7</sup> represents: a cycloalkyl group which may be unsubstituted or substituted by one or more halogen atoms or alkyl, hydroxy, alkylenedioxy, alkoxy, amino, mono- or di-alkylamino, alkylamido, nitro, cyano or trifluoromethyl groups; a phenyl group which may be unsubstituted or substituted by one or more halogen atoms or alkyl, hydroxy, alkylenedioxy, alkoxy, amino, mono- or di-alkylamino, nitro, cyano or trifluoromethyl groups; or a 3 to 7-membered ring comprising from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur, which ring may be unsubstituted or substituted by one or more halogen

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atoms or hydroxy, alkoxy, phenyl, alkoxycarbonyl, amino, mono-alkylamino, di- alkylamino or hydroxycarbonyl groups or one or more alkyl groups which may be unsubstituted or substituted by one or more halogen atoms or hydroxy, alkoxy, hydroxyalkoxy, phenyl, alkoxycarbonyl, amino, mono- or di-alkylamino or hydroxycarbonyl groups; or a pharmaceutically acceptable salt thereof.

Claim 2 (Original) A compound according to claim 1 wherein R<sup>1</sup> represents hydrogen, a C<sub>1</sub>-C<sub>4</sub> alkyl group or a group of formula

$$-(CH_2)_nR^6$$

wherein n is 0, 1 or 2 and R<sup>6</sup> represents phenyl, pyridyl or morpholinyl.

Claim 3 (Previously presented): A compound according to claim 1 wherein  $R^2$  and  $R^3$  independently represent a  $C_1$ - $C_5$  alkyl group, a  $C_{3-10}$  cycloalkyl group, or a group of formula

$$-(CH_2)_nR^6$$

wherein n is 0, 1 or 2 and R<sup>6</sup> represents an unsubstituted or substituted phenyl or pyridyl group.

Claim 4 (Previously presented): A compound according to claim 1 wherein  $R^1$  is a methyl, ethyl, propyl, pyridyl, pyridylmethyl, benzyl or N-morpholinylmethyl group;  $R^2$  is an ethyl, propyl, n-butyl, i-butyl, n-pentyl, methoxyethyl, substituted or unsubstituted benzyl or 3-pyridylmethyl group; and  $R^3$  is an ethyl, propyl or n-butyl group.

Claim 5 (Currently amended): A compound according to claim 1 wherein the ring formed by R<sup>4</sup>, R<sup>5</sup> and the nitrogen atom to which they are attached is a piperidyl, piperazinyl, [1,4]diazepan-1-yl, morpholinyl, pyrazolyl, azetidinyl, <u>or</u> diazabicyclo[2.2.1]hept-2-yl <del>or</del> hexahydro-pyrrolo[1,2-a] pyrazinyl group which is unsubstituted or substituted by one or more groups selected from a C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, carbamoyl, amino, di-C<sub>1</sub>-C<sub>4</sub>-alkylamino, (2-hydroxyethyl)methylamino, hydroxyl, 2,2,2-trifluoroethanoyl, 2,2,2-trifluoroethyl, formyl and hydroxyalkyl groups, alkoxyalkyl groups and hydroxyalkoxyalkyl groups wherein the alkyl moieties contain from 1 to 4 carbon atoms.

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Claim 6 (Currently amended) A compound according to claim 5 wherein R<sup>4</sup> and R<sup>5</sup> together with the nitrogen atom to which they are attached represent a 4-hydroxypiperidyl, 4carbamoylpiperidyl, 3-carbamoylpiperidyl, piperazinyl, 4-methylpiperazinyl, 4-ethylpiperazinyl, 4-formylpiperazinyl, [1,4]-diazepan-1-yl, 4-methyl-[1,4]-diazepan-1-yl, 4-(2hydroxyethyl)piperazinyl, 4-[2-(2-hydroxyethoxy)ethyl]piperazinyl, morpholinyl, aminopyrazolyl, diazabicyclo[2.2.1]hept-2-yl, 5-methyldiazabicyclo[2.2.1]hept-2-yl, 5-(2hydroxyethyl)- diazabicyclo[2.2.1]hept-2-yl, 3(S)-methylpiperazinyl, 3(R)- methylpiperazinyl, (3R,5S)-3,5-dimethylpiperazinyl, (2R,5S)-2,5-dimethylpiperazinyl, (2S,5R)-2,5-dimethyl piperazinyl, 3-dimethylaminoazetidinyl, 3-dimethylaminomethylazetidinyl, 4-allylpiperazinyl, 4propylpiperazinyl, hexahydropyrrolo[1, 2-a]pyrazin-2-yl, (3R,5S)-3,4,5-trimethylpiperazinyl, 4-(2-methoxyethyl)- piperazinyl, 4-(2hydroxyethyl)[1,4]diazepan-1-yl, 4-(2-hydroxy-1-methylethyl)piperazinyl, 4-(2-hydroxy-1,1dimethylethyl)piperazinyl, 4-(2,2,2-trifluoroethyl)- piperazinyl, 4-(3-hydroxypropyl)piperazinyl, 4-(isopropyl) piperazinyl, 4-(2-ethoxyethyl)piperazinyl, 4-(2,2,2-trifluoroethanoyl)piperazinyl, 3hydroxyazetidinyl, 3-(2-hydroxyethyl)methylaminoazetidinyl or 4-(2-hydroxyethyl)- piperidyl group.

Claim 7 (Previously presented): A compound according to claim 1 wherein  $R^4$  and  $R^5$  independently represent hydrogen, a  $C_1$ - $C_4$  alkyl group which is unsubstituted or substituted by a hydroxy or dimethyl amino group, a propynyl group or an amidino group.

Claim 8 (Previously presented): A compound according to claim 1 wherein  $R^4$  is hydrogen or a  $C_1$ - $C_4$  alkyl group and  $R^5$  represents a group of formula

$$-(CH_2)_nR^7$$

wherein n is 0, 1, 2 or 3 and R<sup>7</sup> is a pyridyl, piperidyl, piperazinyl, morpholinyl, triazolyl, tetrazolyl, pyrrolidinyl, 1-ethylaminocyclohex-1-yl, 1-diethylaminocyclohex-1-yl, 1-diethylaminocyclohept-1-yl, 3,4-dimethoxyphenyl, 1-methyl-4-phenylpiperidin-4-yl, imidazoyl, 1-methylpiperid-4-yl, tetrahydrofuranyl, 2,2,6,6,-tetramethylpiperid-4-yl, 4-hydroxypiperid-4-yl, 1-acetamidocyclohept-1-yl, 1-methyl-3-azetidinyl or 4-methylpiperazin-1-yl group.

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## Claim 9 (canceled).

Claim 10 (Original): A compound according to claim 1 which is

6-ethyl-8-[5-(4-methylpiperazine-1-sulphonyl)-2-propoxyphenyl]-6,9-dihydro-

[1,2,4]triazolo[3,4-i]purin-5- one,

8-[2-butoxy-5-(4-methylpiperazine-1-sulfonyl)phenyl]-6-ethyl-6,9-dihydro-[1,2,4]triazolo[3,4-*i*]purin-5-one,

8-[5-(4-methylpiperazine-1-sulfonyl)-2-propoxyphenyl]-6-propyl-6,9-dihydro-

[1,2,4]triazolo[3,4-i]purin-5-one,

 $8-\{5-[4-(2-hydroxyethyl)piperazine-1-sulphonyl]-2-propoxyphenyl\}-6-propyl-6, 9-dihydro-propyl-6, 9-dihyd$ 

[1,2,4]triazolo[3,4-i]purin-5-one,

8-[5-(4-methyl-[1,4]diazepane-1-sulfonyl)-2-propoxyphenyl]-6-propyl-6,9-dihydro-

[1,2,4]triazolo[3,4-i]purin-5-one,

6-butyl-8-{5-[4-(2-hydroxyethyl)piperazine-1-sulfonyl]-2-propoxyphenyl}-6,9-dihydro-

[1,2,4]triazolo[3,4-i]purin-5- one,

3-(5-oxo-6-propyl-6,9-dihydro-5H-[1,2,4]triazolo[3,4-*i*]purin-8-yl)-4-propoxy-*N*-pyridin-4-ylbenzenesulphonamide;

8-[5-((S)-3-Methylpiperazine-1-sulfonyl)-2-propoxyphenyl]- 6-propyl-6,9-dihydro-

[1,2,4]triazolo[3,4-i]purin-5-one,

8-[5-((1S,4S)-5-Methyl-2,5-diazabicyclo[2.2.1]heptane-2-sulfonyl)-2-propoxyphenyl]-6-propyl-

6,9-dihydro-[1,2,4] triazolo[3,4-*i*]purin-5-one,

8-[5-(3-Dimethylaminomethylazetidine-1-sulfonyl)-2-propoxyphenyl]-6-propyl-6,9-dihydro-

[1,2,4]triazolo[3,4-i] purin-5-one,

8-[5-((3*R*,5*S*)-3,5-Dimethylpiperazine-1-sulfonyl)-2- propoxyphenyl]-6-propyl-6,9-dihydro-

[1,2,4]triazolo[3,4-i] purin-5-one,

N-(3-Dimethylamino-2,2-dimethylpropyl)-3-(oxopropyl-6,9-dihydro-5H-[1,2,4]triazolo[3,4-dimethylpropyl)

i]purin-8-yl)-4-propoxy benzenesulfonamide,

 $8-\{5-[4-(2-Hydroxyethyl)-[1,4]diaze pane-1-sulfonyl]-2-propoxyphenyl\}-6-propyl-6,9-dihydro-propyl-6,9-dihy$ 

[1,2,4]triazolo[3,4-i] purin-5-one,

8-{5-[4-(2-Hydroxy-1,1-dimethylethyl)piperazine-1-sulfonyl]-2-propoxyphenyl}-6-propyl-6,9-

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6-Butyl-8-{5-[4-(2-hydroxy-1,1-dimethylethyl)piperazine-1-sulfonyl]-2-propoxyphenyl}-6,9-dihydro-[1,2,4]triazolo[3,4-*i*]purin-5-one or a pharmaceutically acceptable salt thereof.

Claim 11 (Previously presented): A process for preparing a compound as defined in claim 1 which process comprises reacting a hydrazinopurine derivative of formula (II)

wherein R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are as defined in claim 1, with a carboxylic acid of the general formula (III):

(III) 
$$R^1 - CO_2H$$

wherein R<sup>1</sup> is as defined in claim 1, or a reactive derivative thereof optionally in the presence of a polar aprotic solvent.

Claim 12 (Original): A process according to claim 11 wherein said reaction is carried out in the presence of an organic base.

Claim 13 (Withdrawn): A compound of formula (II):

(II)

wherein  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^5$  are as defined in claim 1.

Claim 14 (Withdrawn): A compound of formula (IV):

$$\begin{array}{c|c} S & SO_2NR^4R^5 \\ \hline HN & N & SO_2NR^4R^5 \\ \hline N & R^3O & \end{array}$$

(IV)

wherein  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^5$  are as defined in claim 1.

Claim 15 (Withdrawn): A compound of formula (V):

$$\begin{array}{c|c}
O & H \\
N & N \\
R^2 & R^3O
\end{array}$$
SO<sub>2</sub>NR<sup>4</sup>R<sup>5</sup>

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wherein R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are as defined in claim 1.

Claim 16 (Withdrawn): A compound of formula (VI):

wherein R<sup>2</sup> and R<sup>3</sup> are as defined in claim 1.

# Claim 17 (canceled)

Claim 18 (Previously presented): A process for preparing a compound as defined in claim 1 which process comprises reacting a phenylxanthine of formula (IX):

(IX)

wherein  $R^1$ ,  $R^2$  and  $R^3$  are as defined in claim 1, with chlorosulphonic acid so as to obtain the sulphonyl chloride of formula (X):

wherein  $R^1$ ,  $R^2$  and  $R^3$  are as defined in claim 1, and reacting the sulphonyl chloride of formula (X) with an amine of formula (VIII):

wherein R<sup>4</sup> and R<sup>5</sup> are as defined in claim 1.

Claim 19 (Original): A process according to claim 13 wherein the reaction forming the sulphonyl chloride of formula (X) is carried using an excess of the chlorosulphonic acid or using the chlorosulphonic acid as a solvent, and the conversion of the sulphonyl chloride of formula (X) is carried out in a polar aprotic solvent and in the presence of an organic base.

Claim 20 (Previously presented): A pharmaceutical composition comprising as an active ingredient, at least one compound as defined in claim 1 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

Claim 21-22 (canceled)

Claim 23 (currently amended): A method of treating a human or animal patient suffering from stable, unstable or variant angina, hypertension, pulmonary hypertension, congestive heart failure, renal failure, atherosclerosis, conditions of reduced blood vessel potency patency, peripheral vascular disease, vascular disorders, stroke, bronchitis, chronic asthma, allergic asthma, allergic rhinitis, glaucoma, male erectile dysfunction[[,]] or female sexual dysfunction or diseases characterized by disorders of gut motility, which method comprises administering to said patient requiring such treatment an effective amount of a compound as defined in claim 1.